

REMARKS

Claims 39-56 have been rejected. Priority for claims 42, 51 and 48-56 has been challenged, as has the language added by the Amendment of 11 April 2003 as constituting new matter. Claims 42 and 48-56 were rejected under 35 U.S.C. §112 for failure to comply with the written description requirement. Claims 39-56 were rejected under 35 U.S.C. §102(e) as being anticipated by Cerrina and Gao. Claims 39-56 have also been rejected under 35 U.S.C. §103 over Goldberg in view of Sweatt. Finally, claims 39-56 have also been rejected under the judicially-created doctrine of obviousness-type double patenting. The Applicant thanks the Examiner for the telephonic interview held on July 8, 2003.

I. Rejections under 35 U.S.C. §119(e) (Priority) and 35 U.S.C. §132 (New Matter)

Priority for claims 42, 51 and 48-56 has been challenged, as has the language added by the Amendment of 11 April 2003 as constituting new matter. The claims of this Amendment find support in the Application of Garner as filed, specifically, claims 1-38 of Provisional Application, filed June 4, 1998, Serial No. 60/087,948, now issued U.S. Patent No. 6,295,153 B1. Applicant respectfully traverses the rejection and points to the claims in the original filed application to support the claim of priority, including claim 5 "a lens system" and claim 13 "reactant lines." To advance prosecution, however, Applicant has amended the claims to provide greater support for the broader claim language used in this Amendment and supported in the original specification, to which this application claims priority. Support for the amended claims may be found throughout the Specification, in the figures and in the claims as filed in the parent application, as identified hereinabove. For the foregoing reasons it is requested that the rejection of claims 42, 51 and 48-56 be withdrawn.

II. Rejections under 35 U.S.C. §112

Claims 42 and 48-56 were rejected under 35 U.S.C. §112 for failure to comply with the written description requirement. Applicant respectfully traverses the rejection and states that the specification and claims of this Amendment find support in the Application of Garner as filed, specifically, claims 1-38 of Provisional Application and the specification as filed. Applicant points to the claims in the original filed application to support the claim of priority and for specific written description, including originally filed: claim 5 "a lens system"; and claim 13

“reactant lines.” Applicant has amended the claim language to provide for greater support in the specification for the claim language in Application Serial No. 60/087,948, filed June 4, 1998, in particular Figures 3 and 4 that show the reaction chamber and one or more lenses. Support for the amended claims may be found throughout the Specification, the figures and in the claims as filed in the parent application. For the foregoing reasons it is requested that the rejection of claims 42 and 48-56 be withdrawn.

III. Rejections under 35 U.S.C. §102(e)

Claims 39-56 were rejected under 35 U.S.C. §102(e) as being anticipated by Cerrina, et al., U.S. 6,375,903 and Gao, et al., U.S. 6,426,184. Insofar as this rejection may be applied to the present claims, this rejection is respectfully traversed.

Included herewith is a Declaration under 37 C.F.R. § 1.131 by Dr. Harold “Skip” Garner, the present inventor, that establishes the conception and reduction to practice of the invention of the present claims prior to the effective 35 U.S.C. § 102(e) dates of the Cerrina and Gao references, respectively.

Applicant submits that apparatus claims 39 - 58 are fully patentable and respectfully requests entry of this Amendment and advancement of the Application to allowance in light of the enclosed Declaration under 37 C.F.R. § 1.131 by Dr. Harold “Skip” Garner. The photograph attached (Exhibit A), and the annotated equivalent (Exhibit B, annotated by Applicant for the Examiner’s convenience), demonstrate an invention date prior to the effective date of the United States filing date of the Application cited in the Office Action in support of the rejection. The photograph in Exhibit A antedates the effective filing date of the Cerrina, et al., U.S. Patent No. 6,375,903 Patent, filed February 23, 1998 and Gao, et al., U.S. Patent No. 6,426,184, filed February 1, 1998. The invention disclosed and claimed in the present Application was used to produce a mask pattern on a substrate on the date even therewith, which is on or before February 23, 1998 (6,375,903) and February 1, 1998 (6,426,184), which is a date earlier than the effective dates of the references. Furthermore, the Declaration also includes copies of pages from a laboratory notebook (Exhibits C-1 through C-6 and D-1 through D-3) that describes the steps, the apparatus and the reduction to practice of the invention as instantly claimed used to conduct a light catalyzed chemical reaction within a reaction chamber, that is, actual reduction to practice

of the apparatus of the present invention as claimed as early as October 1997, which is prior to the February 1998 date of Cerrina and Gao. Therefore, the claims in the present Application are allowable in light of the art cited, Cerrina and Gao, as the present claims antedate the 35 U.S.C. 102(e) date of the cited art. All pending claims are therefore allowable and withdrawal of the rejection is respectfully requested.

IV. Rejections under 35 U.S.C. §103

Claims 39-56 have also been rejected under 35 U.S.C. §103 over Goldberg, et al., U.S. Patent 5,959,098, filed April 17, 1996), in view of Sweatt, et al., U.S. Patent 5,870,176, filed June 18, 1997. The Applicant respectfully traverses this rejection.

In order to establish a *prima facie* case of obviousness, the prior art must teach or suggest to one of ordinary skill in the art to make the claimed compositions or device or how to carry out the claimed invention. MPEP §2143. Furthermore, “[i]f the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.” MPEP § 2142. It is submitted that the Office Action does not factually support a *prima facie* case of obviousness based on the combination of Goldberg and Sweatt for the following reasons.

Goldberg does not teach, suggest or disclose maskless digital optical chemistry. In fact, all that Goldberg teaches is the prior art that the present invention is designed to overcome, the use of countless photolithographic masks. Nothing in Goldberg teaches, suggests or motivates maskless digital optical chemistry. The sole reference to “mirrors 122” is to control the direction of light for use in the well-known in the art of photolithography. All that Goldberg may teach is the use of multiple mirrors for use with, e.g., standard stepper mask photolithography. The “mirrors 122” of Goldberg are not connected to a computer, are not directionally controllable or addressable. The mirrors in Goldberg are nothing more than just plain, dumb mirrors used for garden-variety photolithography through mask 128 (Col. 15, l. 16). As such, Goldberg fails to teach, suggest or motivate the present invention or its combination with Sweatt.

The same limitations hold true for Sweatt, nothing in the patent teaches, suggests or motivates the combination proposed in the Office Action that would teach or suggest all the claim limitations to establish a *prima facie* case of obviousness. There is not a single reference to any motivation to combine with art such as Goldberg to catalyze a reaction within a reaction

chamber. Specifically, Sweatt merely teaches striking a "photoresist coated wafer" (Col. 4, ll. 27-28). Nothing in Sweatt could be used to conduct digital optical chemistry within a reaction chamber, as such, there is no teaching, suggestion or motivation in Sweatt for conducting such a reaction or for combining Sweatt with Goldberg. Neither Goldberg, nor Sweatt reference each other, nor do their disclosures teach, suggest or motivate the skilled artisan toward the present invention as claimed.

In addition, the prior art must also reveal to one of ordinary skill in the art that the claimed compositions, device or process would also have a reasonable expectation of success. Both the suggestion and the reasonable expectation of success must be found in the prior art and not in the applicant's disclosure. See *in re Dow Chemical Co.*, U.S.P.Q.2d (BNA) 1529 (Fed Cir. 1988); and, *in re Vaeck*, 20 U.S.P.Q.2d (BNA) 1238 (Fed. Cir. 1991). Again, Goldberg and Sweatt fail to suggest or motivate a combination that would have any expectation of success. In fact, there is no teaching, suggestion or motivation whatsoever in Sweatt for the use of a reaction chamber in which to catalyze a chemical reaction. Nor is there any teaching, suggestion or motivation in Goldberg to use anything other than masks and photolithography. All that Sweatt teaches is a single reference to striking a "photoresist coated wafer" (Col. 4, ll. 27-28), which the skilled artisan will recognize does not occur, and is unable to occur, within a reaction chamber.

Finally, the cited references establish that it might be "obvious to try" various combinations of claim elements, however, "obvious to try" is not the standard for patentability under 35 U.S.C. § 103. The Federal Circuit has stated:

In some cases, what would have been "obvious to try" would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication of which parameters were crucial or no direction as to which of many possible choices is likely to be successful. [citing cases]

... In others, what was "obvious to try" was to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the invention or how to achieve it. *In re O'Farrell*, 7 U.S.P.Q.2d 1673, 1681 (Fed. Cir. 1988).

Both "obvious to try" situations arise here. The Examiner has cited one patent (Goldberg) that merely teaches the prior art that the present invention overcomes. Specifically, the "mirrors 122" are simply too broad to render Applicants' specific use of a digital light processor under

computer control as obvious, as such, the prior art provides “no indication of which parameters were crucial or no direction as to which of many possible choices is likely to be successful,” that is the types of “mirrors” that eliminate the need for photolithographic masks. As to Sweatt, the Office Action uses the present disclosure to impermissibly reconstruct the claimed invention, namely, digital optical chemical reactions within a reaction chamber using a computer controlled digital light processor, e.g., a micromirror array, to catalyze a chemical reaction within a reaction chamber. Specifically, the Goldberg mirrors could never be used to redirect light to perform digital optical chemistry, nor is there any teaching, suggestion or motivation to do so. Sweatt does not teach, suggest or motivate use of a reaction chamber, the delivery of liquids, etc., nor does it teach digital optical chemistry using UV light to catalyze, e.g., the addition of amino acid, carbohydrate, nucleic acid or other monomers to a nascent oligomer chain. Sweatt may provide, at most, a tool with general guidance as to how to achieve “advanced computer chips” (Col. 6, ll. 24-25) by lithography on a “photoresist coated wafer” (Col. 4, ll. 27-29) or “precisely matched multilayer Bragg reflective coatings (Col. 6, ll. 46-47). For the foregoing reasons it is requested that the rejection of claims 39-56 be withdrawn.

V. Rejection for Obviousness Double Patenting

Claims 39-56 have been rejected under the judicially-created doctrine of obviousness-type double patenting. Upon allowance of the claims, Applicant will file a Terminal Disclaimer to overcome the rejection.

VI. Conclusion

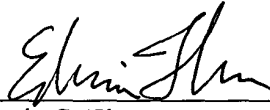
This Amendment does not increase the number of independent claims. This amendment does increase the total number of dependent claims, however, no fee is believed due to the amendment.

Appl. No.: 09/998,341
Amdt. dated September 2, 2003
Reply to Office Action of June 26, 2003

The Examiner is invited to telephone the undersigned at the telephone number listed below if he or she has any questions or suggested amendments to the claims.

Dated this September 2, 2003.

Respectfully submitted,
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